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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/804,710	03/19/2004	George DeStefano	9/277	7531

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EXAMINER	
HAGHIGHATIAN, MINA	
ART UNIT	**PAPER NUMBER**
1616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/804,710	DESTEFANO ET AL.	
	Examiner	Art Unit	
	Mina Haghighatian	1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *04/04 & 09/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claims 1-7 are pending.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Jager et al (WO 9413262).

Jager et al teach stabilized medicinal aerosol solution formulations comprising medicaments that degrade or decompose by interaction with solvents or water, an HFC propellant, a cosolvent and an acid (see abstract). Most preferred medicaments for use in the said aerosol solution formulations include **ipratropium bromide and albuterol** (see page 8, lines 3-8). The suitable cosolvents in clued ethyl alcohol, polyethylene glycol, glycerol, etc. Most preferred cosolvent is **ethanol** (see page 9, line 17 to col. 10, line 11). The disclosed formulations contain an acid to prevent degradation. Suitable acids include ascorbic acid and **citric acid**, and the most preferred acid is citric acid (page 10, lines 17-32). Table 1 discloses a formulation comprising ipratropium bromide monohydrate, ethanol, HFA 134a, acid and water in the amount of 0.0 to 5%.

Claims 1-4 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Lewis et al (EP 1219293).

Lewis et al teach a composition for use in an aerosol inhaler comprising an active agent, an HFA propellant and a cosolvent. Cosolvents include alcohols such as **ethanol** and propellants include HFA 134a and HFA 227 (see [0012] and [0010]). The active agents may be any one or more salbutamol (also known as albuterol), ipratropium bromide, beclomethasone, etc (see [0064]). The formulations may include a low volatility component such as **polyvinyl pyrolidone** (see 0056]). Other suitable low volatility materials include saturated and unsaturated carboxylic acids such as ascorbic acid (see [0055]).

Lewis also discloses the method of making the formulation and filling the aerosol inhaler. The method includes filling the container with a) one or more active materials, b) one or more low volatility components, c) one or more co-solvents followed by the addition of the HFA propellant. The formulations are said to contain up to 0.5% water and Table 2, discloses four formulations two of which contain **0.1% water**.

> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4 and 6 are rejected under 35 U.S.C. 102(e) as being anticipated by Ashurst et al (6,511,652).

Ashurst et al teach a metered dose inhaler having part or all of its internal surfaces coated with one or more fluorocarbon polymers for dispensing an inhalation drug formulation comprising beclomethasone dipropionate, a propellant in combination with other active agents and one or more excipients (see abstract and summary). The co-solvent is preferably an alcohol such as **ethanol** (col. 2, lines 60-66). Suitable active agents include **salbutamol, ipratropium**, etc or combinations thereof. Suitable propellants include **HFA 134a or HFA 227** (col. 3, lines 5-50).

Ashurst et al also discloses that the said formulation preferably contain at least 0.015%, e.g. **0.015 to 1% water** by weight of the formulation (col. 5, lines 24-39).

Claims 1-2, 4 and 6 are rejected under 35 U.S.C. 102(e) as being anticipated by Keller et al (6,475,467).

Keller et al teach suspension formulations for delivery by metered dose inhalers comprising active agents in particulate form. It is disclosed that in such formulations the amount of **water** is less than 1% by weight (see col. 3, lines 55-67). The active agents suitable for the said formulations include ipratropium bromide, salmeterol, mometasone, etc. Formulations may comprise **two or more active agents** (col. 5, lines 20-45). Examples of preferred co-solvents include **ethanol** (col. 9, lines 1-10). Formulations may contain a buffer substance such as **citric acid** (col. 9, lines 29-35). Suitable propellants include HFA 134a and HFA 227 (col. 7, lines 54-60).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lewis et al (EP 1219293) in view of Jager et al (WO 9413262).

Lewis et al and Jager et al are discussed above. Lewis et al discloses all the components of the instant claims except for citric acid. While disclosing addition of carboxylic acids such as ascorbic acid, lacks specific disclosure on citric acid.

Jager et al teaches all the components of the formulations except for polyvinyl pyrrolidone. While disclosing various suitable cosolvents such s polyols, it does not specifically disclose polyvinyl pyrrolidone. Jager however, teaches the addition of an acid such as citric acid to the formulations as a stabilizer and a buffer.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined formulations and method of making them as taught by Lewis et al and Jager et al and end up with the claims formulations. Alternatively, it would have been obvious to one of ordinary skill in the art given the general teachings of Lewis et al on the formulations and method of making them, to have looked in the art for specific carboxylic acids such as citric acid as taught by Jager et al with the reasonable expectations of successfully preparing stable and effective formulations for aerosol administration. In other words, the claims would have been obvious because a person of ordinary skill in the art would have been motivated to combine the prior art to achieve the claimed invention and that there would have been a reasonable expectation of success.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to

be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-7 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-11 of U.S. Patent No. 6,423,298 in view of Lewis et al (EP 1219293). Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the instant Application would have been obvious over the claims of the U.S. Patent '298 in view of Lewis et al '293. Specifically, the instant claims and the reference claims are drawn to a formulation comprising an HFA propellant, one or more active agents and one or more excipients. The instant claims additionally require 0.13 to 0.18% water and reference claims do not require water. Lewis et al discloses similar formulations and teaches that the amount of water preferably is about 0.1%. it would have been obvious to one of ordinary skill in the art to have implemented the teachings of 0.1% water of Lewis et al in the formulations of the reference claims with a reasonable success.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mina Haghighatian whose telephone number is 571-272-0615. The examiner can normally be reached on core office hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Mina Haghighatian
Patent Examiner
September 28, 2007